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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,283	10/06/2004	Yasushi Shioya	8013-1217	7545
466	7590	11/16/2006	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			NGUYEN, CAM N	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/510,283

Applicant(s)

SHIOYA ET AL.

Examiner

Cam N. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/18/06 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicants' amendment and remarks, filed August 18, 2006, has been made of record and entered. Claims 1-5 have been amended.

Claims 1-5 are currently pending and under consideration.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

In lines 5-6, "on metal hydroxide, metal carbonate, basic metal carbonate, or a mixture thereof" should be changed to --on a metal hydroxide, a metal carbonate, a basic metal carbonate, or mixtures of compound thereof--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102(b)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Pitchai et al., "hereinafter Pitchai", (US Pat. 5,686,380).

Pitchai discloses a supported silver catalyst comprising (a) a support material, at least 50% by weight of which is an alkaline earth metal carbonate, (b) 25 to 60 weight percent silver, (c) 0.5 to 3 weight percent, calculated as potassium cation, of a salt selected from potassium

nitrate and potassium nitride, and (d) 0.05 to 2.5 weight percent, calculated as Mo, of a molybdenum promoter (see col. 12, claim 1). See also claims 5 & 8 of col. 12 of the reference.

There is no patentable distinction seen between the claimed catalyst and that disclosed by Pitchai. Thus, the claim are anticipated by the teaching of the reference.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitchai et al., "hereinafter Pitchai", (US Pat. 5,686,380).

Pitchai discloses a catalyst as described above, except for the following differences.

Regarding claim 4, Pitchai does not disclose the claimed metal concentration. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have optimized such metal concentration in Pitchai in order to achieve an effective catalyst material, because of *In re Boesch*.

Regarding claim 5, while Pitchai does not teach using his catalyst to treat a metal hydride-containing exhaust gas, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have utilized the disclosed catalyst for the same process as well because it is a useful catalyst material.

Claim Rejections - 35 USC § 102(e)

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Mul et al., “hereinafter Mul”, (US Pat. 6,392,066 B1).

Mul discloses a catalyst composition comprising: (a) an alkaline earth metal carbonate support; (b) a catalytically effective amount of silver, and (c) a promoting amount of lanthanide metal promoter (see col. 11, claim 15). Further, the catalyst composition comprising about 40% to about 45% weight of silver (see col. 12, claims 27-28).

There is no patentable distinction seen between the claimed catalyst and that disclosed by Mul. Thus, the claim are anticipated by the teaching of the reference.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiovsky et al., “hereinafter Kiovsky”, (US Pat. 3,979,332) taken together with Pitchai et al., “hereinafter Pitchai”, (US Pat. 5,686,380) or Mul et al., “hereinafter Mul”, (US Pat. 6,392,066 B1).

Kiovsky discloses a molten metal salt-based catalyst system comprising a molten metal salt carrier selected from the group consisting of the halides and carbonates of alkali metals and alkaline earth metals and the halides of zinc, copper, manganese, cadmium, tin and iron, and mixtures thereof, etc., said molten salt having dispersed therein one or more catalytically active forms of iron selected from the group consisting of finely divided elemental iron, iron oxides, iron carbides or mixtures thereof (see col. 12, claim 1).

Regarding claims 1-2, Kiovsky does not disclose the Group-VIII noble metals or silver. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated by adding such known silver metal onto the molten metal salt carrier in the catalyst system of Kiovsky in order to achieve an improved and effective catalyst system because it is known in Pitchai and Mul to deposit silver onto the same carrier material as disclosed by Kiovsky (see Pitchai at col. 12, claim 1; see Mul at col. 12, claims 27-28).

Regarding claim 3, Kiovsky does not disclose the Group-VIII noble metals. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated by adding such known Group-VIII noble metals onto the molten metal salt carrier in the catalyst system of Kiovsky in order to achieve an improved and effective catalyst system because the noble metals are well known catalytically active component in the catalyst art.

Regarding claim 4, Kiovsky does not disclose the claimed metal concentration. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have optimized such metal concentration in Kiovsky in order to achieve an effective catalyst material, because of *In re Boesch*.

Regarding claim 5, while Kiovsky does not teach using his catalyst to treat a metal hydride-containing exhaust gas, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have utilized the disclosed catalyst for the same process as well because it is a useful catalyst material.

Response to Applicants' Arguments

11. Applicants' amendment and response filed on August 18, 2006 has been considered, but not deemed persuasive in view of the new ground of rejection(s) and/or objection(s) above.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

13. Claims 1-5 are pending. Claims 1-5 are rejected. No claims are allowed.

Contacts

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Nguyen/cnn

Primary Examiner

November 09, 2006

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